

ARBUZOV, B.A.; ZOROASTROVA, V.M.; ANTOKHINA, L.A.

Synthesis of phosphinic acid esters containing heterocyclic radicals. Report 7: Phosphinic acid esters with mono and di-oxidoquinoxaline radicals. Izv.AN SSSR.Otd.khim.nauk no.6; 1016-1022 Je '61. (MIRA 14:6)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstvennogo universiteta.

(Phosphinic acid) (Quinoxaline)

ARBUZOV, B.A.; KHISMATULLINA, A.G.

Monoxide and dioxide of abietic acid. Izv. AN SSSR. Otd.khim.  
nauk no.7:1280-1287 Jl '61. (MIRA 14:7)

1. Kazanskiy gosudarstvennyy universitet imeni V.I. Ul'yanova-Lenina.

(Abietic acid)

ARBUZOV, B.A.; DIANOVA, E.N.

Esters of cyclohexen-2-yl-1-phosphonic acid and some of their derivatives. Izv. AN SSSR. Otd.khim.nauk no.7:1288-1291 Jl. '61.  
(MIRA 14:7)

1. Khimicheskiy institut im. A.M. Butlerova Kazanskogo  
universiteta im. V.I. Ul'yanova-Linina.  
(Phosphonic acid)

ARBUZOV, B.A.; KHISMATULLINA, A.G.

Thermal decomposition of abietic acid adducts and its esters with  
maleic anhydride. Izv. AN SSSR. Otd.khim.nauk no.9:1630-1635  
S '61.  
(MIRA 14:9)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.  
(Abietic acid) (Maleic anhydride)

ARBUZOV, B.A.; VINOGRADOVA, V.S.; POLEZHAYEVA, N.A.

Esters of  $\beta$ -ketophosphinic acids. Report No.8: Reaction of  
2,5-dibromocyclohexanone with triethyl phosphite. Izv.AN SSSR.-  
Otd.khim.nauk no.11:2013-2020 N '61. (MIRA 14:11)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstven-  
nogo universiteta.

(Cyclohexanone) (Phosphorous acid)

ARBUZOV, B.A.; VINOGRADOVA, V.S.; POLEZHAYEVA, N.A.

Esters of  $\beta$ -ketophosphinic acids. Report No.9: Reaction of  
2,6-dibromo- and 2,6-dichlorocyclohexanone with one and two moles  
of triethyl phosphite. Izv.AN SSSR.Otd.khim.nauk no.11:2020-2028  
N '61. (MIRA 14:11)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstven-  
nogo universiteta.  
(Cyclohexanone) (Phosphorous acid)

30163

S/062/61/000/012/002/012

B119/B147

53700

AUTHORS: Arbuzov, B. A., Shapshinskaya, L. A., and Kudryavtseva, M. I.

TITLE: Vinyl-tin compounds in diene synthesis with cyclones

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 12, 1961, 2160 - 2162

TEXT: The authors reacted the compounds  $(CH_3)_3SnCH=CH_2$  (1),  $(C_2H_5)_3SnCH=CH_2$  (2), and  $(C_6H_5)_3SnCH=CH_2$  (3) with phenyclone, tetracyclone, and acecyclone in sealed tubes under  $CO_2$  atmosphere. Absolute benzene served as solvent. At 120 - 127°C after 6 hr, phenyclone with (1) produced 1,4-diphenyl-1,4-endocarbonyl-2,3-(0,0'-biphenylene)-5-(trimethylstannyl)-5,6-dihydrobenzene (melting point 193 - 194°C) in 50% yield; at 120 - 130°C after 10 hr, with (2) it produced 1,4-diphenyl-1,4-endocarbonyl-2,3-(0,0'-biphenylene)-5-(triethylstannyl)-5,6-dihydrobenzene (melting point 184 - 185°C) in 49% yield; at 140 - 150°C after 43 hr, with (3) it produced 1,4-diphenyl-1,4-endocarbonyl-2,3-(0,0'-biphenylene)-5-(triphenylstannyl)-5,6-dihydrobenzene (melting point 253 - 254°C). At 180 - 190°C after 16 hr

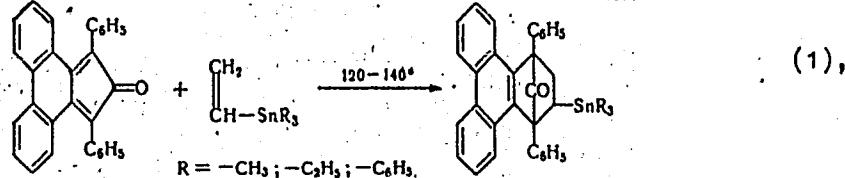
X

Card 1/3

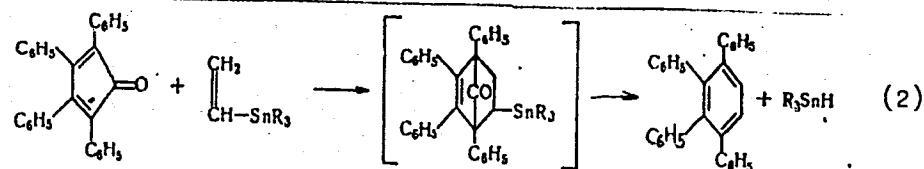
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S/062/61/000/012/002/012  
B119/B147

Vinyl-tin compounds in diene ...

tetracyclone with (1) produced tetraphenyl benzene in 63.5% yield. Experiments with (2) produced analogous results. Acecyclone with (1) produced 1,4-diphenyl-2,3-(1,8-naphthylene)-benzene at 170 - 190°C after 20 hr, at 200 - 230°C after 10 hr. Experiments with (3) produced similar results. The reaction with phenyclone proceeds as follows:



the reaction with tetracyclone:



Card 2/3

Vinyl-tin compounds in diene ...

30163  
S/062/61/000/012/002/012  
B119/B147

In all cases, (1) reacts most readily followed by (2) and (3). There are 9 references: 7 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: D. Seyferth, Stone, J. Amer. Chem. Soc. 79, 515 (1957); L. A. Rothman, E. J. Becker, J. Organ. Chem. 25, 2203 (1960).

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan' State University imeni V. I. Ul'yanov-Lenin)

SUBMITTED: June 30, 1961

X  
Card 3/3

ARBUZOV, B.A.; ZOROASTROVA, V.M.; OSIPOVA, M.P.

Esters of phosphoric and thiophosphoric acids containing heterocyclic radicals. Report No.4: Reaction of phosphoric and thiophosphoric acid chlorides with  $\alpha$ -aminopyridine. Izv. AN SSSR Otd.khim.nauk no.12:2163-2168 D '61. (MIRA 14:11)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstvennogo universiteta im. V.I.Ulyanova-Lenina.  
(Phosphoric acid) (Phosphorothioic acid) (Pyridine)

ARBUZOV, B.A., akademik

Centennial of A.M.Butlerov's theory of chemical structure. Zhur.  
VKHO 6 no.4:443-446 '61. (MIRA 14:7)  
(Chemical structure)

ARBUZOV, B.A.; VIL'CHINSKAYA, A.R.

Diene synthesis of alloocimene with asymmetric dienophiles.  
Part 2: Synthesis of substituted naphthalenes from adducts  
with alloocimene. Zhur.ob.khim. 31 no.7:2199-2204 Jl '61.

(MIRA 14:7)

1. Nauchno-issledovatel'skiy khimicheskiy institut imeni  
A.M. Butlerova pri Kazanskom gosudarstvennom universitete  
i Kazanskiy gosudarstvennyy meditsinskiy institut.  
(Naphthalene) (Alloocimene)

ARBUZOV, B.A.; DIANOVA, E.N.; SHAGIDULLIN, R.R.

Reaction of carbon disulfide with sodium diethylphosphite.  
Zhur. ob. khim. 31 no.12:4015-4019 D '61. (MIRA 15:2)

1. Nauchno-issledovatel'skiy khimicheskiy institut imeni A.M. Butlerova pri Kazanskom gosudarstvennom universitete i Kazanskiy filial AN SSSR.

(Carbon disulfide)  
(Phosphorous acid)

ARBUZOV, B.A., akademik; ISAYEVA, Z.G.; SAMITOV, Yu.Yu.

Proton magnetic resonance study of bicyclic terpenes and their  
oxides. Dokl. AN SSSR 137 no. 3: 589-592 Mr '61. (MIRA 14:2)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A.M. Butlerova  
pri Kazanskom gosudarstvennom universitete im. V.I. Ul'yanova-Lenina.  
(Terpenes) (Nuclear magnetic resonance and relaxation)

5.3630 2209 1287, 1153

21495

S/020/61/137/004/019/031  
B103/B208

AUTHORS: Arbuzov, B.A., Academician, Vinogradova, V.S. and  
Palezhayeva, N.A.

TITLE: Diethyl ester of 1-ethoxy-cyclohexene-1-phosphinic-2-acid

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 4, 1961, 855 - 858

TEXT: The authors prepared the diethyl ester of 1-ethoxy-cyclohexene-1-phosphinic-2-acid (X) in an indirect way, having previously (Ref. 1, DAN, 121, 641, 1958) proved that the esters of cyclohexanone-2-phosphinic acid could neither be obtained by the Arbuzov rearrangement nor by the Michaelis-Becker reaction (neither of these reactions is described). Therefore, they used the diethyl phosphoric ester of the enol form of cyclohexanone-2-phosphinic ester (III) whose radicals were interchanged by ethanol (Ref. 2, DAN, 128, 81, 1959). A comparatively low yield of the phosphoric ester of cyclohexenol phosphinic acid, and a poor reproducibility of the experiment induced the authors to study the causes of these results, and to find better methods of preparing the latter ester. The reaction bet-

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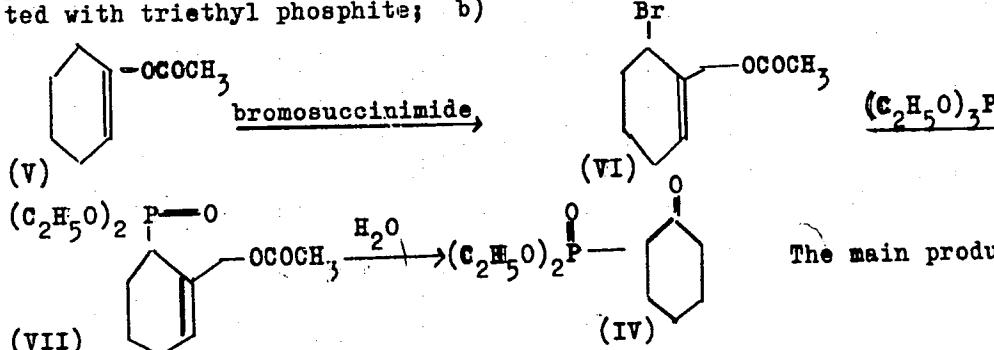
21495

s/020/61/137/004/019/031

B103/B208

**Diethyl ester of ...**

ween dibromo-cyclohexanone and triethyl phosphite (Ref. 2) is complicated. Conformation of the initial dibromo-cyclohexanone might be one of the causes of this complicated course of reaction. The authors therefore studied the effect of triethyl phosphite and sodium diethyl phosphite on cis- and trans-  
-2,6-dibromo- and on 2,6-dichloro-cyclohexanones. The following attempts of synthesizing (III) failed: a) bromination of diethyl-cyclohexenyl phosphate by bromosuccinimide, in which the resultant monobromide was treated with triethyl phosphite; b)  $\text{Br}$



The main product was

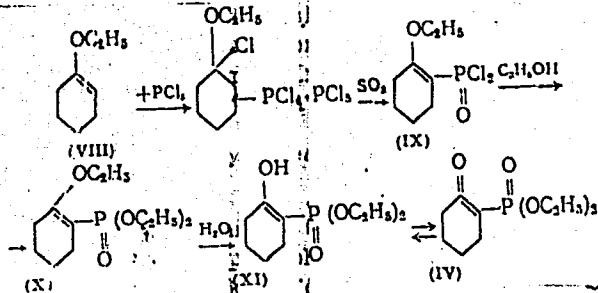
Card 2/4

21495

S/020/61/137/004/019/031  
B103/B208

Diethyl ester of ...

diethyl-cyclohexenyl phosphate (I). I.F. Lutsenko and M. Kirillov (Ref. 3, DAN, 128, 89, 1959) reported the possibility of preparing  $\alpha$ -phosphone aldehydes and ketones by adding pentavalent phosphorus to enol acetate. The authors have so far not been able to find suitable conditions for this reaction in the case of cyclohexanone enol acetate. However, they synthesized (X) in an analogous way, proceeding from 1-ethoxy-cyclohexene (VIII) (see Scheme)



Card 3/4

21495

S/020/61/137/004/019/031  
B103/B208

Diethyl ester of ...

By adding  $\text{PCl}_5$  to (VIII), and by treating the resultant complex with  $\text{SO}_2$ , they obtained the acid chloride (IX). Esterification of (IX) yielded the end product (X). Saponification of (X) with acidified water gave the diethyl ester of cyclohexanone-2-phosphinic acid (XI). Raman, infrared (IR), and ultraviolet spectra were taken for (IX) - (XI). The IR and Raman spectra of (XI) were in agreement with those of the ester obtained by the authors by ester interchange of (III) (Ref. 2). The authors conclude from a comparison of the spectra of the resultant esters that equilibrium is considerably shifted toward the enol form (XI) in their solutions in hexane. They do not exclude the participation of the  $\text{P}=\text{O}$  group in the formation of an intramolecular hydrogen bond. There are 4 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Nauchno-issledovatel'skiy khimicheskiy institut im. A.M. Butlerova pri Kazanskom gosudarstvennom universitete  
(Scientific Research Institute of Chemistry imeni A.M. Butlerov of Kazan' State University)

SUBMITTED: December 16, 1960

Card 4/4

ARBUZOV, B.A., SHAPSHINSKAYA, L.A.

A study of the reaction of diene hydrocarbons with aryl, alkyl,  
and phenoxychlorophosphines.

*Khimiya i Primeneniye Fosfororganicheskikh Soyedineniy* (Chemistry and  
application of organophosphorus compounds) A. YE. ARBUZOV, Ed.  
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on  
Chemistry of Organophosphorus Compounds.

ARBUZOV, B.A., DIANOVA, E.N.

Esters of cyclopentene - 2-yl- and cyclohexane-2-yl phosphinic acids  
and certain of the thier derivatives.

*Khimiya i Primeneniye Fosfororganicheskikh Soyedinenii (Chemistry and  
application of organophosphorus compounds)* A. YE. ARBUZOV, Ed.  
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on  
Chemistry of Organophosphorus Compounds.

ARBUZOV, B.A.

"Course of the development of the chemistry of organophosphorus compounds."

*Khimiya i Primeneniye Fosfororganicheskikh Soyedinenii* (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed.  
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1969 Kazan Conference on  
Chemistry of Organophosphorus Compounds.

ARBUZOV, B.A., VINOKUROVA, G.M., PERFILYEVA, I.A.

The synthesis of certain bifunctional compounds containing phosphorus.

*Khimiya i Primeneniye Fosfororganicheskikh Soyedineniy* (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed.  
Publ. by Kazan. Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

ARBUZOV, B. A.; SAMITOV, Yu. Yu.

"Conformation and anisotropy of chemical bonds in cyclic  
ethers investigated by NMR spectroscopy" (Session 5b)  
Report to be submitted for the Intl. Symposium on  
Molecular Structure and Spectroscopy (IUPAC)  
Tokyo Japan, 10-15 Sept. 1962

Kazan State University

ARBUZOV, B. A., KLADNITSKAYA, Ye. N., PENEV, B. N. and FAUSTOV, R. N.

"Elastic Scattering of  $\Lambda$ -Hyperons and  $K_1^0$ -Mesons on Hydrogen"

report presented at the Intl. Conference on High Energy Physics, Geneva,  
4-11 July 1962

Joint Institute for Nuclear Research  
Laboratory of High Energies, Dubna, 1962

ARBUZOV, B.A.; LOGUNOV, A.A.; TAVKHELIDZE, A.N.; FAUSTOV, R.N.

The asymptotic behaviour of the scattering amplitudes and  
the renormalization group method. Dubna, Ob"edinennyi in-t  
iadernykh issledovaniii, 1962. 7 p.  
(No subject heading)

ARBUZOV, B.A.; SHAPSHINSKAYA, L.A.

Synthesis of heterocyclic compounds with phosphorus in their rings.  
Report No.2: Interaction between diene hydrocarbons and dichloroan-  
hydrides of aryl- and alkylphosphinic and phosphorous acids. Izv.  
AN SSSR Otd.khim.nauk no.1:65-71 Ja '62. (MIRA 15:1)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina.  
(Hydrocarbons) (Phosphinic acid) (Phosphorous acid)

AREFUOV, B.A.; VINOGRADOVA, V.S.; POLEZHAYEVA, N.A.

Esters of  $\beta$ -ketophosphinic acids. Report No.10: Diethyl ester of  
2-cyclopentanone-1-phosphinic acid. Izv. AN SSSR Ot. khim. nauk  
no.1:71-78 Ja '62. (MIRA 15:1)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A.M. Butlerova  
Kazanskogo gosudarstvennogo universiteta im. V.I. Ul'yanova-Lenina.  
(Phosphinic acid)

ARBUZOV, B.A.; BERDNIKOV, Ye.A.

Polarographic behavior of some diphenylphosphoryl hydrazones. Izv.  
AN SSSR Otd.khim.nauk no.1:165-168 Ja '62. (MIRA 15:1)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.  
(Hydrazones)

ARFUZOV, B.A.; KATAYEVA, L.M.

Electron paramagnetic resonance study of the interaction between  
sodium diethylphosphite and di- and triphenylmethyl halides. Izv.  
AN SSSR Otd.khim.nauk no.1:172-174 Ja '62. (MIRA 15:1)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina.  
(Radicals (Chemistry)--Spectra)

33981

S/062/62/000/002/006/013  
B117/B138

5-0630

AUTHORS: Arbuzov, B. A., Vinokurova, G. M., and Aleksandrova, I. A.TITLE: Synthesis of bifunctional organophosphorus compounds.  
1. Addition of phenyl phosphine to unsaturated compounds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 2, 1962, 290-295

TEXT: It had been shown previously (Ref. 3: B. A. Arbuzov, G. M. Vinokurova, and I. A. Perfil'yeva, Dokl. AN SSSR, 127, no. 6) that phenyl phosphine adds to acrylate, methacrylate, and allyl alcohol under formation of bifunctional adducts (yield 50-70 %). In the present investigation the addition of phenyl phosphine, allyl acetate, and 2-methyl-5-vinyl pyridine was performed by heating the reagents both without catalyst and with azo-bis-isobutyric acid dinitrile. In the absence of the catalyst, phenyl phosphine quite readily adds to methyl vinyl pyridine (adduct 50 %), but with far more difficulty to allyl amine and allyl acetate. In the presence of azo-bis-isobutyric acid dinitrile, the yield of adducts could be increased to 60 and even 80 per cent. All

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33981  
S/062/62/000/002/006/013  
B117/B138

Synthesis of bifunctional...

of the synthesized products were oxidized either with oxygen or with hydrogen peroxide. In the former case oxygen was sent through the product heated to 130-140°C for 10-15 hr, and the product was then distilled in vacuum. Oxidation with hydrogen peroxide was performed by the method described in Ref. 2 (see below). Phosphine sulfoxides were obtained by addition of a determined amount of sulfur to corresponding tertiary phosphines. Oxygen and sulfur readily add to the tertiary phosphines obtained. The resulting phosphine oxides and phosphine sulfoxides contain two functional groups each. They are either colorless or yellowish thick liquids with a weak unpleasant odor or solid crystalline substances. Difficulties were met in calculating the molecular refraction of phosphine oxides and phosphine sulfides. The mean value calculated for the atomic refraction of phosphorus was 6.02 with maximum deviations of +0.32 -0.26, thus diverging from Kosolapoff's (Ref. 4: see below) 5.5. Saponification of bis-(2-carbmethoxy ethyl)phenyl phosphine oxide led to bis-(2-carboxy ethyl)phosphine oxide, melting point 199-202°C. This compound had first been obtained by saponification of bis-(2-cyanethyl)phenyl phosphine (Ref. 2). There are 3 tables and 4 references: 1 Soviet and 3 non-Soviet. The two references to English-

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Card 2/3

ARBUZOV, B.A.; ISAYEVA, Z.G.; RATNER, V.V.

Action of lead tetraacetate on  $\Delta^3$ -carene. Izv. AN SSSR Otd.-  
khim.nauk no.4:644-649 Ap '62. (MIRA 15:4)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo universiteta  
im. V.I.Ul'yanova-Lenina.  
(Lead acetates) (Carene)

ARBUZOV, B.A.; ISAYEVA, Z.G.; IBRAGIMOVA, N.D.

Oxidation of  $\Delta^3$ -carene by oxygen in the presence of chromic  
anhydride. Izv. AN SSSR Otd. khim. nauk no. 4:649-657 Ap 62.  
(MIRA 15:4)

1. Khimicheskiy institut im. A.M. Butlerova Kazanskogo universiteta  
im. V.I.Ulyanova-Lenina.  
(Carene) (Chromium oxides)

ARBUZOV, B.A., akademik

Importance of physical methods of investigation of organic substances. Zhur. VKHO 7 no.4:447-456 '62. (MIRA 15:8)  
(Chemical structure) (Chemistry, Physical and theoretical)  
(Chemistry, Organic)

ARBUZOV, B.A.; YULDASHEVA, L.K.

Dipole moments and the conformation of cyclic compounds. Report No.1:  
1,3-Dioxolanes. Izv. AN SSSR.Otd.khim.nauk no.10:1728-1734 O '62.  
(MIRA 15:10)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstvennogo  
universiteta.

(Dioxolane—Dipole moments)

ARBUZOV, B.A.; YULDASHEVA, L.K.

Dipole moments and the conformation of cyclic compounds. Izv. AN SSSR.  
Otd.khim.nauk no.10:1734-1737 O '62. (MIRA 15:10)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstvennogo  
universiteta. (Dioxane—Dipole moments)

ARBUZOV, B.A.; SHAPSHINSKAYA, L.A.; YEROKHINA, V.M.

Interaction of 2,3-dimethylbutadiene with ethylene- and propylene  
chlorophosphites. Izv. AN SSSR. Otd.khim.nauk no.11:2074-2076  
N '62. (MIRA 15:12)

I. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-  
Lenina.

(Butadiene) (Ethylene phosphite)  
(Propylene phosphite)

AREUZOY, B.A.; SHARSHINSKAYA, L.A.; PRYTKOVA, G.A.

Interaction of cyclones with isomeric dihydronaphthalenes. Izv.  
AN SSSR. Otd.khim.nauk no.11:2084-2087 N '62. (MIRA 15:12)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-  
Lenina.  
(Cycloalkanones) (Naphthalene)

ARBUZOV, B.A., akademik

Significance of physical research methods for studies of organic  
matter. Vest.AN SSSR 32 no.8:26-33 Ag '62. (MIRA 15:8)  
(Organic compounds) (Chemistry, Physical and theoretical)

ARBUZOV, B.A.; KLANDNITSKAYA, Ye.N.; PENEV, V.N.; FAUSTOV, R.N.

Elastic scattering of  $\Lambda$ -hyperons and  $K_1^0$ -mesons on hydrogen.  
Zhur.eksp.i teor.fiz. 42 no.4:979-984 Ap '62. (MIRA 15:11)

1. Ob'yedinenyyi institut yadernykh issledovaniy.  
(Hyperons—Scattering) (Mesons—Scattering) (Hydrogen)

ARBUZOV, B.A., akademik; KONOVALOV, A.I.; SAMITOV, Yu.Yu.

Chemical shift and activity of dienophile in the diene synthesis. Dokl. AN SSSR 143 no.1:109-110 Mr '62.  
(MIRA 15:2)  
I. Kazanskiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina.  
(Dienophiles)

ARBUZOV, B.A., akademik; SAMITOV, Yu.Yu.; MAMINA, R.M.

Proton magnetic resonance of 2,2-dimethyl-1,3-propanediol  
sulfite and carbonate. Dokl. AN SSSR 143 no.2:338-341 Mr '62.  
(MIRA 15:3)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina.  
(Propanediol--Spectra)

ARIUZOV, B.A.; NGUYEN VAN K'YEU; FAUSTOV, R.N.; SARANTSEVA, V.R.,  
tekhn. red.

[ $K_{e4}$  -decays and isoscalar  $J/\psi$ -resonance at low energies]  $K_{e4}$   
-raspady i izoskaliarnyi  $J/\psi$ -rezonans pri maloi energii. Dubna,  
Ob"edinennyi in-t iadernykh issledovanii, 1962. 4 p.  
(MIRA 15:12)

(Nuclear reactions) (Mesons--Decay)

ARBUZOV, B.A.; NURETDINOVA, O.N.

Addition of some  $\alpha$ -halo ethers to unsaturated compounds. Izv.  
AN SSSR.Otd.khim.nauk no.2:311-316 F '63. (MIRA 16:4)

1. Institut organicheskoy khimii AN SSSR, Kazan'.  
(Halogen compounds) (Unsaturated compounds)

ARBUZOV, B.A.; VINOKUROVA, G.M.

Synthesis of bifunctional organophosphorus compounds. Report  
No.2: Addition of butylphosphine to unsaturated compounds. Izv.  
AN SSSR.Otd.khim.nauk no.3:502-506 Mr '63. (MIRA 16:4)

1. Khimicheskiy institut im. A.Ye.Arbu佐va AN SSSR.  
(Phosphine) (Unsaturated compounds)

ARBUZOV, B.A.; VINOGRADOVA, V.S.; POLEZHAYEVA, N.A.; SHAMSUTDINOVA, A.K.

Esters of  $\beta$ -ketophosphinic acids. Report No.11: Action of diisomethane on diethyl esters of acetyl- and benzoylphosphinic acids. Izv. AN SSSR. Otd. khim. nauk no.4:675-683 Ap '63. (MIRA 16:3)

1. Khimicheskiy institut im. A.M. Butlerova Kazanskogo gosudarstvennogo universiteta im. V.I.Ulyanova-Lenina.  
(Phosphinic acid) (Methane)

ARBUZOV, B.A.; NURETINOVA, O.N.

Addition of some  $\alpha$ -halogen ethers to alkylene  $\alpha$ -thiooxides. Izv.AN  
SSSR Otd.khim.nauk no.5:927-929 My '63. (MIRA 16:8)

1. Institut organicheskoy khimii AN SSSR, Kazan'.  
(Ethers) (Halogen compounds)

ARBUZOV, B.A.; VIZEL', A.O.

Reactions of diazoacetic ester with phosphorous acid and its esters.  
Izv. AN SSSR. Otd.khim. nauk no.14:749-750 Ap '63. (MIRA 16:3)

1. Institut organicheskoy khimii AN SSSR, Kazan'.  
(Acetic acid) (Phosphorous acid) (Esters)

"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000101920007-1

ARBUZOV, B.A.

Importance of physical research methods for the study of organic substances. Analele chimie 18 no.2:22-42 Ap-Je '63.

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000101920007-1"

S/048/63/027/001/028/043  
B125/B102

AUTHORS: Arbuzov, B. A., Samitov, Yu. Yu., and Konovalov, A. I.

TITLE: Effect of intermolecular interactions on the proton chemical shifts in some organic systems

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 1, 1963, 82 - 86

TEXT: The chemical interaction can be inferred from measurements of the chemical shift in p.m.r. spectra. The effect of organic solvents on the chemical shift ( $\Delta h_4$ ) is studied in chloroform, maleic anhydride and acrylonitrile by measuring the proton magnetic resonance. The field  $h_4$  arises from intermolecular interactions due to the formation of a hydrogen bond, molecular complexes, and hydrogen exchange. The measurements were made with an n.m.r. spectrograph having a resolution of  $\sim 5 \cdot 10^{-8}$ . In some cases the shifts of the p.m.r. lines with respect to the peak of the aromatic hydrogens were taken. With increasing dilution the line of the chemical shift is shifted towards higher field strengths. The bend in the curve at Card 1/2

8/048/63/027/001/030/043  
B125/B102

AUTHORS: Arbuzov, B. A., Samitov, Yu. Yu., and Yuldasheva, L. K.

TITLE: Spectra of proton magnetic resonance of the substituted dislo-  
cations

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27,  
no. 1, 1963, 89 - 92

TEXT: A study of the p.m.r. spectra of 2-methyldioxolane, 2-chloromethyl-  
dioxolane, and trichloromethylidioxolane proved that the influence of the  
halide replacing the hydrogen in the methyl radical of 2-methyl-1,3-dioxo-  
lane extends as far as the protons of the methylene groups that are in  
 $\delta$ -position with respect to the oxygen. The polar groups also cause chemi-  
cal shifts of the  $\beta$ -hydrogens. Owing to the effect of the five-membered  
rings the chemical shifts of the protons in dioxalane are by 0.3 smaller  
than in the compounds with open chains (e.g. actal, orthoester). A sub-  
stitution of the proton of the methyl radical by the first chlorine atom  
influences the chemical shift of the protons of the methylene group more strongly  
than the subsequent introduction of further chlorine atoms. There is 1  
Card 1/2

Spectra of proton ...  
figure.

S/048/63/027/001/030/043  
B125/B102

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan' State University imeni V. I. Ul'yanov-Lenin)

Card 2/2

S/056/63/044/001/055/067  
B164/B102

AUTHORS: Arbuzov, B. A., Nguyen Van H'yeu, Faustov, R. N.

TITLE:  $K_{e4}^+$  decays and low-energy isoscalar  $\pi\pi$  resonance

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,  
no. 1, 1963, 329 - 331

TEXT: This study is a supplement to the theoretical examinations by Nguyen  
Van H'yeu (ZhETF 44, no. 1, 162, 1963) which show that the spectra of the  
following decays

$$K_0^- \rightarrow e^+ + \nu + \pi^- + \pi^0 \quad (1)$$

$$K^+ \rightarrow e^+ + \nu + \pi^0 + \pi^0 \quad (2)$$

$$K^+ \rightarrow e^+ + \nu + \pi^- + \pi^+ \quad (3)$$

can be completely determined by the partial amplitudes  $F^l(s)$ ,  $l = 0, 1$ , of  
the process

$$\pi + \pi \rightarrow K + \bar{K} \quad (4)$$

Card 1/2

L 12408-63

EWT(1)/FCC(w)/BDS AFFTC/ASD/ESD-3 IJP(C)

ACCESSION NR: AP3001394

S/0020/63/150/004/0764/0766 59

AUTHOR: Arbusov, B. A.; Logunov, A. A.; Tavkhelidze, A. N.; Faustov, R. N.TITLE: Regge poles and the Bethe-Salpeter equation

SOURCE: AN SSSR. Doklady, v. 150, no. 4, 1963, 764-766

TOPIC TAGS: Regge poles, Bethe-Salpeter equation

ABSTRACT: The properties of Regge poles were investigated by these authors on the basis of the perturbation theory. It was also shown by them that this analysis is connected with certain difficulties. The purpose of the present work is the study of the structure of Regge singularities on the basis of an equation of the Bethe-Salpeter type. Orig. art. has: 19 equations.

ASSOCIATION: Ob'yedinennyj institut yadernykh issledovanij (Joint Institute for Nuclear Research)

SUBMITTED: 15Nov62

DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF Sov: 000

OTHER: 006

Card 1/1

ARBUZOV, B.A., akademik; SAMITOV, Yu.Yu.; ISAYEVA, Z.G.

Nuclear magnetic resonance spectra of protons and conformation of  
 $\Delta^3$ -carene oxide. Dokl. AN SSSR 150 no.5:1036-1038 Je '63.  
(MIRA 16:8)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A.B.  
Betlerova pri Kazanskom gosudarstvennom universitete im. V.I.  
Ul'yanova-Lenina.  
(Carene--Spectra) (Protons)

ARBUZOV, B.A.; NURETDINOVA, O.N.

Addition of some -halo ethers to unsaturated compounds.  
Part 2: Addition of allyl chloromethyl and -chloroethyl  
ethyl ethers. Izv. AN SSSR. Ser. khim. no.12:2137-2142  
D '63. (MIRA 17:1)

1. Institut organicheskoy khimii AN SSSR, Kazan'.

ARBUZOV, B.A.; SHAPSHINSKAYA, L.A.

Addition of the chlorides of trivalent phosphorus acid esters to  
conjugated dienes. Izv. AN SSSR. Ser.khim. no.3:581 Mr '64.  
(MIRA 17:4)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina.

ARBUZOV, B.A., s'ademik; NAUMOV, V.A.; ALEKSEYEV, N.V.

Electron diffraction study of the  $\alpha$ -pinene oxide molecule. Dokl.  
AN SSSR 155 no. 3:592-595 Mr '64. (MIRA 17:5)

1. Institut organicheskoy khimii AN SSSR, Kazan', i Institut  
elementoorganicheskikh soyedineniy AN SSSR.

ARBUZOV, B. A.; ZOROASTROVA, V. M.; IBRAGIMOVA, N. D.

Esters of phosphoric acid containing a cyano group. Izv.  
AN SSSR Ser Khim no. 4:656-661 Ap '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A. M.  
Butlerova Kazanskogo gosudarstvennogo universiteta.

ARBUZOV, B. A.; ZOROASTROVA, V. M.; SACITOVA, R. Kh.

Esters of phosphoric and phosphorothioic acids containing heterocyclic radicals. Report No. 6: Interaction of phosphoryl and thiophosphoryl chlorides with benzimidazole and morpholine. Izv AN SSSR Ser Khim no. 4:661-669 Ap '64.  
(MIRA 17:5)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A. M. Butlerova Kazanskogo gosudarstvennogo universiteta.

ARBUZOV, B.A., akademik; SAMITOV, Yu.Yu.

Nuclear magnetic resonance and the structure of molecules.. Priroda  
53 no.6:13-24 '64. (MIRA 17:6)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.

ARBUZOV, B.A.; NURETDINOVA, O.N.

Addition of some  $\alpha$  halogen ethers to  $\alpha$ -alkylene oxides.  
Izv. AN SSSR. Ser. khim. no. 5:836-840 My '64. (MTRA 17:5)

1. Institut organicheskoy khimii AN SSSR, Kazan'.

ARBUZOV, B.A., akademik; NAUMOV, V.A.

Electron diffraction study of the structure of the *d*-pinene molecule.  
Dokl. AN SSSR 158 no.2:376-378 S '64. (MIRA 17:10)

1. Institut organicheskoy khimii AN SSSR, Kazan'.

ARBUZOV, B.A., akademik; VIZEL', A.O.

Monomeric trihalophosphoranes of the cyclic series and some of their transformations. Syntheses based on phosphorus tribromide. Dokl. AN SSSR 158 no.5:1105-1107 O '64. (MIRA 17:10)

1. Institut organicheskoy khimii AN SSSR, Kazan'.

ARBUZOV, B.A.; ZOLOTOVA, M.V.

Esters of  $\alpha$ -ketoaminophosphinic acids. Izv. AN SSSR. Ser. khim.  
no.10:1793-1797 O '64.  
(MIRA 17:12)

I. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.

ARBUEV, B.A., akademik; VIL'CHINSKAYA, A.R.; SAMITOV, Yu.Yu.; YULDASHEVA, L.K.

Structure of allögimene dioxide. Dokl. AN SSSR 164 no.5:1041-  
1043 0 '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A.M. Butlerova  
pri Kazanskem gosudarstvennom universitete.

ARBUZOV, B.A., akademik; ISAYEVA, Z.G.; RATNER, V.V.

Structure of the oxide obtained in the oxidation of  $\Delta^2$ -carene by  
selen'um dioxide. Dokl. AN SSSR 164 no.6:1289-1292 9 '65.  
(MIRA 18:10)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A.M.  
Butlerova pri Kazanskom gosudarstvennom universitete im. V.I.  
Ul'yanova-Lenina.

ARBUZOV, B.A.; VERESHCHAGIN, A.N.; KARLIN, V.V.; AGANOV, A.V.

Bromoethylenes in diene synthesis. Izv. AN SSSR. Ser. khim.  
no.8:1376-1381 '65. (MIRA 18:9)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.

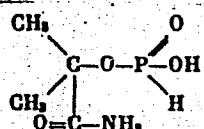
1129-66 (N) EWT(1)/EWT(m)/EPF(c)/EWP(j)/EWA(b)-2/EWA(c) RPL JW/EW/RO/RM  
ACCESSION NR: AP5022930 UR/0062/65/000/008/1389/1396

AUTHOR: Arbuzov, B. A.; Dianova, E. N.; Vinogradova, V. S.; Shamsutdinova, A. K.

TITLE: The nature of di-*d*-cyanisopropyl ester of phosphorous acid, 7, 6, 4455  
SOURCE: AN SSSR. Izvestiya Sosiva khimicheskaya no. 8 1965 1200 1205

**TOPIC TAGS:** ester, phosphorous acid, IR spectrum

**ABSTRACT:** The structure of di-*o*-cyanisopropyl



and tri-*a*-cyanisopropyl esters of phosphorous acid were investigated by IR spectroscopy. The IR spectra were taken using a Nigler H-800 spectrophotometer. The 2000-3500 cm<sup>-1</sup> range was investigated with an IKS-14 spectrophotometer. The IR spectrum

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L 1129-66

ACCESSION NR: AP5022930

of di- $\alpha$ -cyanisopropyl ester of phosphorous acid is shown in fig. 1 of the Enclosure. To verify the structure, these spectra were compared with the spectra of products from hydrolysis of the chloroanhydride of di- $\alpha$ -cyanisopropyl phosphoric acid. It was found that di- $\alpha$ -cyanisopropyl as well as tri- $\alpha$ -cyanisopropyl esters of phosphoric acid contain an atom of pentavalent phosphorous. Orig. art. has: 5 figures, 1 formula.

ASSOCIATION: Khimicheskiy institut im. A. M. Butlerova Kazanskogo gosudarstvennogo universiteta (Chemical Institute, Kazan State University) 44,55

SUBMITTED: 24Jun63

ENCL: 01

SUB CODE: GC, OC

NO REF Sov: 003

OTHER: 007

Card 2/3

L 1129-66

ACCESSION NR: AP5022930.

ENCLOSURE # 01

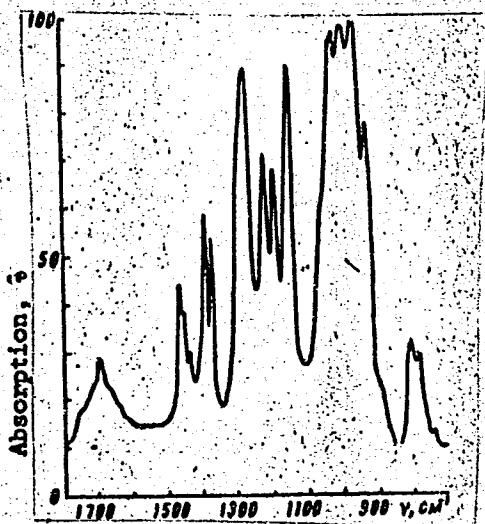


Fig. 1.

Card 3/3

ARBUZOV, B.A.; VERESHCHAGIN, A.N.; REMIZOV, A.B.

Diene synthesis and structure of adducts of trans-1,2-dichloro-  
ethylene with acyclic dienes. Izv. AN SSSR. Ser. khim. no.9:  
1575-1584 '65. (MIRA 18:9)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-  
Lenina.

ARBUZOV, B.A.; DIANOVA, E.N.

Azeotropes of dialkylphosphorous acids with some alcohols.  
Izv. AN SSSR. Ser. khim. no.9:1584-1591 '65. (MIRA 18:9)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.

ARBUZOV, B.A.; SHAPSHINSKAYA, I.A.; YEROKHINA, V.M.

Interaction of ring-forming chlorophosphites with diene hydrocarbons. Izv. AN SSSR. Ser. khim. no.10:1820-1826 '65.

(MIRA 18:10)

1. Kazan kiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina.

ARBUZOV, B.A.; FILIPPOV, A.T.

Iterative method in nonrenormalizable field theory. Zhur. eksp.  
i teor. fiz. 49 no.3:990-999 S '65.  
(MIRA 18:10)

1. Ob'yedinennyi institut yadernykh issledovaniy.

1 62776-AF F77(1)/F77(2) F77(3) PI-1 77142 1000000000  
TRANSMISSION NO. 145020475 REC'D. 06/05/1986 10:54

AUTHOR: Arbuзов, Б. А. (Academician); Визель, А. О.; Зыкова, Т. В.; Санитов, Ю.

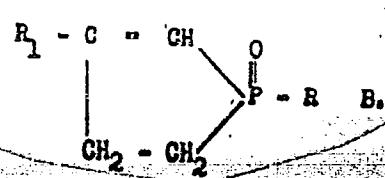
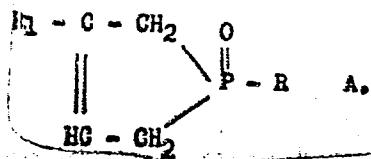
TITLE: Structure and characteristics of nuclear magnetic resonance proton spectra of derivatives of phosphacyclopentene with unsymmetrically located substituents in the ring

SOURCE: AN SSSR. Doklady, v. 159, no. 5, 1964, 1062-1065

TOPIC TAGS: butadiene, hydrolysis, isoprene, nuclear magnetic resonance, proton

Abstract: Compounds of the general structural types A (I, R = Br, R<sub>1</sub> = H; II, R = Cl, R<sub>1</sub> = H; III, R = OMe, R<sub>1</sub> = H; IV, R = OEt, R<sub>1</sub> = H; VIII, R = OMe, R<sub>1</sub> = Me) and B (V, R = Br, R<sub>1</sub> = Me; VI, R = Cl, R<sub>1</sub> = Me; VII, R = OH, R<sub>1</sub> = Me)

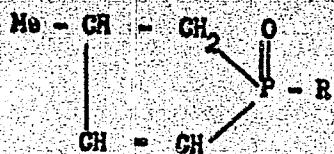
Card 1/3



I 62776-65

ACCESSION NR: AP5020625

To prepare these compounds, methods described by B. A. Arbuzov et al in earlier publications were used. I and V were prepared from  $\text{P}(\text{Pr})_3$  and the corresponding dienes (butadiene or isoprene). VI was prepared from isoprene and  $\text{P}(\text{Et})_3$ . VII was obtained by hydrolysis of the acid halides V and VI. Esters III, IV, and VIII were prepared from the corresponding acid halides. II was prepared from butadiene and Et d' chlorophosphite. For phosphacyclopantanone derivatives derived from isoprene, three types of structure are possible, i. e., A, ( $\text{R}_1 = \text{Me}$ ), B ( $\text{R}_1 = \text{Me}$ ), and C:



It was established by determinations of proton nuclear magnetic resonance and double nuclear-nuclear ( $\text{P} - \text{H}$ ) resonance spectra that V, VI, and VII had the structure A and VIII the structure B.

Orig. art. has 2 figures, 1 graph, and 3 tables.

Card 2/3

62776-65  
ACCESSION NR: AP5020525

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR, Kazan' (Institute of Organic Chemistry, Academy of Sciences SSSR); Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan State University)

ITEM NUMBER: 71154

BN T: R

SUB CODE: MP, JU

NO REF Sov: 006

OTHER: 003

JPRS

282  
Card 3/3

ARBUZOV, B.A., akademik; VIZEL', A.O.; ZAIKONNIKOVA, I.V.; STUDENTSOVA, I.A.;  
DUNAYEV, V.G.; ZVEREVA, M.A.; IVANOVSKAYA, K.M.

Organophosphorus compounds of low toxicity. Dokl. AN SSSR 165  
no.1:91-94 N '65. (MIRA 18:10)

1. Institut organicheskoy 'himii AN SSSR, Kazan', i Kazanskiy  
gosudarstvennyy meditsinskly institut.

ISAYEVA, Z.G.; ARBUZOV, B.A.; RATNER, V.V.; POVODYREVA, I.P.

Oxidation of  $\Delta^3$  -carene by mercury acetate. Izv. AN SSSR. Ser. khim.  
no.3:466-475 '65. (MIRA 18:5)

1. Khimicheskiy institut im. A.M.Bu'lerova Kazanskogo gosudarstven-  
nogo universiteta im. V.I.Ul'yanova-Lenina.

ISAYEVA, Z.G.; ARBUZOV, B.A.; RATNER, V.V.

Oxidation of  $\Delta^3$ -carene by selenious acid. Izv. AN SSSR. Ser. khim.  
no.3:475-485. '65. (MIRA 18:5)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstven-  
nogo universiteta im. V.I.Ulyanova-Lenina.

ARBUZOV, B.A.; VERESHCHAGIN, A.N.

Steric relations in diene synthesis reaction of cyclopentadiene with  
monosubstituted ethylenes. Izv. AN SSSR. Ser. khim. no.3:486-491 '65.  
(MIRA 18:5)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.

ARBUZOV, B.A.; VERESHCHAGIN, A.N.

Dipole moments and the structure of adducts of hexachlorocyclopentadiene with halo-substituted ethylenes. Izv. AN SSSR. Ser. Khim. no.4:598-604 '65. (MIRA 18:5)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.

ARBUZOV, B.A.; POLEZHAYEVA, N.A.; VINOGRADOVA, V.S.; SHAMSUTDINOVA, A.K.

Products of interaction of chloroacetone and  $\omega$ -bromoacetophenone  
with diphenylphosphinic acid esters. Izv. AN SSSR. Ser. khim. no.4:  
669-678 '65. (MIRA 18:5)

1. Khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstven-  
nogo universiteta im. V.I.Ul'yanova-Lenina.

ARBUZOV, B.A.; ISAYEVA, Z.G.; GUBAYDULLIN, M.G.

Structure of (-) alcohol from the reaction of  $\Delta_3$  - carena oxidation in the presence of chromic anhydride. Izv. AN SSSR, Ser. khim. no.4:678-684 '65. (MIRA 18:5)

1. Khimicheskiy institut im. A.M. Butlerova Kazanskogo gosudarstvennogo universiteta im. V.I.Ulyanova-Lenina.

ARBUZOV, B.A.; ISAYEVA, Z.G.; ANDREYEVA, I.S.

Isomerization of  $\alpha$ -pinene and  $\Delta^3$ -carene oxides with lithium diethylamine. Izv. AN SSSR. Ser. khim. no.5:838-843 '65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy khimicheskiy institut im. A.M.Butlerova Kazanskogo gosudarstvennogo universiteta im. V.I.Ul'yanova-Lenina.

AREUZOV, B.A.; BUTENKO, G.G.; YARKOVA, E.G.

Reaction of dibenzylphosphinic acid with formic acid esters.  
Izv. AN SSSR. Ser. khim. no.6:1085-1088 '65.

(MIRA 18:6)

1. Kazanskiy gosudarstvennyy universitet imeni Ul'yanova-Lenina.

ARBUZOV, B.A.; KONOVALOV, A.I.

Formation of molecular complexes in the reaction of diene synthesis.  
Izv. AN SSSR. Ser. khim. no.7:1290-1292 '65. (MIRA 18:7)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.

1 20353-66 EWT(m)/EWP(1) RM

ACC NR: AP6012077

SOURCE CODE: UR/0062/65/000/010/1820/1826

AUTHOR: Arbuzov, B. A.; Shapshinskaya, L. A.; Yerokhina, V. M.35  
34  
B

ORG: Kazan' State University im. V. I. Ul'yanov-Lenin (Kazanskiy gosudarstvennyy universitet)

TITLE: Interaction of cyclic chlorophosphites with diene hydrocarbons

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1965, 1820-1826

TOPIC TAGS: phosphorous compound, chlorine compound, conjugated polyolefin hydrocarbon, chemical reaction

ABSTRACT: The interaction of ring chlorophosphites with conjugated diene systems<sup>1</sup> of both linear and cyclic structure was investigated. The addition of 2,3-butylene- and 3-chloropropylenechlorophosphites to 2,4-hexadiene, and alloocimene was accomplished. All of the reactions, take place by the same mechanism and undergo the Arbuzov rearrangement resulting in substituted phospholinoxides. The characteristics of the obtained substituted-3-phospholin-1-oxides are presented.

Such reactive dienes as cyclopentadiene and anthracene do not enter into the diene synthesis with ring chlorophosphites.

The reaction of ring chlorophosphites with acyclic dienes proceeds quite difficultly and does not occur with donor dienes (cyclopentadiene and anthracene). The most reactive ring chlorophosphites in the reactions

Card 1/2

UDC: 542.91+661.718.1

L 20353-66

ACC NR: AP6012077

with dienes are the pyrocatechinchloro(bromo)phosphites which react with divinyl unusually readily at room temperature and without a catalyst. The characteristics of the obtained products are presented. The authors thank E. G. Yarkovaya for taking the IR-spectra. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 11Jul63 / ORIG REF: 003 / OTH REF: 003

Card 2/2 vmb

ARBUZOV, B.A., akademik; YERASTOV, O.A.; REMIZOV, A.B.

Spectroscopic study of the tautomerism of 4-carbomethoxy-3-ketothiophane, 2-carbomethoxy-3-ketothiophane, and 4-methyl-2-carbomethoxy-3-ketothiophane. Dokl. AN SSSR 162 no.1:82-85 My '65. (MIRA 18:5)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ulyanova-Lenina.

ARBUZOV, B.A., akademik; NAUMOV, V.A.; SHATRUKOV, L.F.

Electron diffraction study of the structure of  $\Delta^3$ -carene oxide molecules.  
Dokl. AN SSSR 163 no.2:355-358 J1 '65. (MIRA 18:7)

1. Institut organicheskoy khimii AN SSSR, Kazan'.

L 31359-66 EWP(j)/EWT(l)/EWT(m) RM/RO  
ACC NR: AP6021099

SOURCE CODE: UR/0062/66/000/002/0254/0257

40  
B

AUTHOR: Arbuzov, B. A.; Zoroastrova, V. M.

ORG: Scientific Research Chemical Institute im. A. M. Butlerov, Kazan' State University im. V. I. Ul'yanov-Lenin (Nauchno-issledovatel'skiy khimicheskiy institut Kazanskogo gosudarstvennogo universiteta)

TITLE: Synthesis of esters of phosphinic acids containing heterocyclic radicals. Report 8. 2-methyl-3-(omega-phosphonemethyl)-quinoxaline esters with an alkyl group

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1966, 254-257

TOPIC TAGS: chemical synthesis, esterification, phosphinic acid, alkyl radical, fungicide, heterocyclic base compound

ABSTRACT: A description is given of phosphinic esters of 2-methyl-3-(omega-phosphonemethyl)quinoxaline. The compounds were prepared by the Arbuzov reaction of 2-methyl-3-(omega-chloromethyl)quinoxaline with trialkylphosphites. The authors did not succeed in obtaining the dimethyl ester of 2-methyl-3-(omega-phosphonemethyl)quinoxaline, nor the 2-methyl-3-(omega-phosphonemethyl) oxide of quinoxaline, despite frequent attempts. According to preliminary data, the compounds containing quinoxaline radicals described in the report show activity toward certain species of fungi. At present the fungicidal properties of esters of 2-methyl-3-(omega-phosphonemethyl)quinoxaline are under study. [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 05Aug63 / ORIG REF: 001 / OTH REF: 002  
Card 1/1 CC UDC: 542.91 + 661.718.1 + 547.7

ACC NR: AP6033453

SOURCE CODE: UR/0413/66/000/018/0038/0038

INVENTOR: Arbuzov, B. A.; Vizel', A. O.

ORG: none

TITLE: Preparation of esters of ketophosphinic acids. Class 12,  
No. 185903

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 38

TOPIC TAGS: ketophosphinic acid ester, oxaphospholene derivative,  
phosphinic acid, ester, alcohol

ABSTRACT: To broaden the raw material base and increase the variety of  
the final products in esters of ketophosphinic acids, derivatives of  
1,2-oxaphosphol-4-ene are heated with alcohols at 160—170°C.

[W.A. 50]

SUB CODE: 07/ SUBM DATE: 25Oct65

Card 1/1

UDC: 547.26'118.07

ARBUZOV, B. A.

Powdered binder for foundry cores, K. S. Lipovakaya  
B. A. Arbuзов and V. Z. Khelan, *Lilchos Proizvodstvo*  
1956, No. 12, p. 6. Good results were obtained with a core  
binder made of 40 weight parts of pitch, 40 parts of conc.  
sulfite liquor, and 20 parts of clay ground to 40 mesh. The  
nature of pitch is immaterial, provided it has a m.p. of 80°C.  
About 5% of the binder is added to the sand, resulting  
after baking at 240° in cores having a tensile strength  
of at least 8 kg./sq. mm. J. D. Gat

A Q b u 2 0 4 , - S . H .

KOLOBNEV, I.F.; KRYMOV, V.V.; POLYANSKIY, A.P.; AL'TMAN, M.B., kand.tekhn.  
nauk, retsenzent; ZAKHAROVA, G.V., kand.tekhn.nau, retsenzent;  
TIKHOVA, N.M., kand.tekhn.nauk, retsenzent; ABBUZOV, B.A., inzh.,  
retsenzent; ASTAULOV, V.S., inzh., retsenzent; BOYKOVA, L.T., inzh.,  
retsenzent; KITARI-OGIU, G.S., inzh.retsenzenty; KRYGIN, B.T., inzh.,  
retsenzent; LOTAREVA, O.B., inzh., retsenzent; SMIRNOVA, T.I., inzh.,  
retsenzent; KHODOROVSKIY, G.L., inzh., retsenzent; RUBTSOV, N.N., prof.  
doktor tekhn.nauk.red.; KOLOBNEV, I.F., kand.tekhn.nauk., red.  
SIROTIN, A.I., inzh. red.izd-va; MODEL', B.I., tekhn.red.

[Founder's handbook; shape founding with aluminum and magnesium  
alloys] Soravochnik liteishchika; fasonnoe lit'e iz aliuminevykh i  
magnievykh splavov. Pod obshchei red. N.N.Rubtsova. Moskva, Gos.  
nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 482 p. (MIRA 11:2)  
(Founding) (Aluminum-Metallurgy)  
(Magnesium--Metallurgy)

ARBUZOV, Boris Afanas'yevich; ALEKSEYEV, Grigoriy Nikolayevich; ROVANTSEV,  
Vasiliy Yegorovich; BAZILEV, N.P., red.; GARMASH, L.M., otv. za  
vypusk; SUKHAREVA, R.A., tekhn.red.

[Improving the technology of shell molding with use of shell cores]  
Usovershenstvovanie tekhnologii lit'ia v kokilli s ispol'zovaniem  
obolochkovykh sterzhnei. Moskva, Mosk.dom nauchno-tekhn.propagandy  
im. F.E.Dzerzhinskogo, 1958. 25 p. (Perevodoi opty proizvodstva.  
Ser."Tekhnologiya mashinostroeniia", no.32. Liteinoe proizvodstvo)  
(Shell molding (Founding))

PHASE I BOOK EXPLOITATION SOY/3768

Arbuzov, Boris Afanas'yevich, Grigoriy Nikolayevich Alekseyev, and Vasiliy Yegorovich Rovantsev

Usovershenstvovaniye tekhnologii lit'ya v kokili s ispol'zovaniyem obolochkovykh sterzhney (Perfecting of the Metal-Mold Casting Technique With Shell-Type Cores) Moscow, 1958. 27 p. (Series: Peredovoy opty proizvodstva. Seriya, "Tekhnologiya mashinostroyeniya," No. 32, Liteynoye proizvodstvo) 4,000 copies printed.

Sponsoring Agencies: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znanii RSFSR, and Moscow, Dom nauchno-tehnicheskoy propagandy imeni F. E. Dzerzhinskogo.

Ed.: N. P. Bazilev; Reviewer: L. M. Garmash; Tech. Ed.: R. A. Sukhareva.

PURPOSE: This booklet is intended for foundry workers.

COVERAGE: The book deals with the manufacture of shell-type cores and the casting of aluminum and aluminum-alloy parts in metal molds. It is claimed

Card 1/3

ARBUZOV, B. A.

"Mold and Core Materials Used in Producing Shapes Castings of Aluminum and Magnesium Alloys"

Light Alloys. no. 1: Physical Metallurgy, Heat Treatment, Casting, and Forming;  
Principal Reports of the Conference, Moscow, Izd-vo AN SSSR, 1958, 497 P.  
(2nd. A.U. Conf on Light Alloys 1955)

Arbuzov, I. A.

Solidification of Metals (Cont.) ; Trans. of 2nd Conf. 1956 (1956)  
on Theory of Foundry Processes, Moscow, Mashgiz, 1958, 532pp.

Dubrovskiy, A.M., Engineer. Deformation of Sand Molds During  
Solidification and Cooling of Steel Castings

496

Arbuzov, B.A., Engineer. Requirements Which Must Be Met by  
Mold Materials and Ways of Improving the Quality of Light-  
alloy Castings

512

Resolution of the Conference on the Problem of Metal Solid-  
ification at the Institutes of Machine Engineering and  
Metallurgy of the Academy of Sciences of the USSR

529

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